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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,731	07/24/2001	Mahmoud Abdel-Rahman	10010911-1	1791

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[REDACTED] EXAMINER

ODA, CHRISTINE K

ART UNIT	PAPER NUMBER
2858	4

DATE MAILED: 08/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>09/910,731</b>	Applicant(s) <b>Abdel-Rahman &amp; Rhodes</b> <i>[Signature]</i>
	Examiner <b>Christine K. Oda</b>	Art Unit <b>2858</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_.
- 2a)  This action is FINAL.      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-4, 7-9, 11-13, and 16-18 is/are rejected.
- 7)  Claim(s) 5, 6, 10, 14, 15, 19, and 20 is/are objected to.
- 8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)  The translation of the foreign language provisional application has been received.

- 15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3
- 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5)  Notice of Informal Patent Application (PTO-152)
- 6)  Other: \_\_\_\_\_

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**Part III. DETAILED ACTION***Informalities*

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §102(f) or (g) prior art under 35 U.S.C. §103(a).

*Drawings*

2. The drawings are objected to because:
  - A. Figs. 1B and 1C should be designated by a legend such as PRIOR ART in order to clarify what is applicant's invention, M.P.E.P. §608.02(g).
- 15 3. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects **must consist of two parts**:
  - A. A *separate* letter to the Draftsman in accordance with M.P.E.P. §608.02(r); and
  - 20 B. A print or pen-and-ink sketch showing changes in *red ink* in accordance with M.P.E.P. §608.02(v).

**IMPORTANT NOTE:** A proposed drawing correction or corrected drawings are required in reply to the Office Action to avoid abandonment of the application. The Objection to the drawings will not be held in abeyance. *Correction is required.*

- 25 *Claim Objections*

Although Applicant's Claim(s) meet the requirement of 35 U.S.C. §112 second paragraph, i.e. the metes and bounds are determinable the use of terms could be improved.

4. Claims 1 and 11 are objected to under 37 C.F.R. §1.75, because of the following informalities:

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A. With respect to Claim 1, line 4, "an ionization chamber system" should be --said (or the) ionization chamber system--, since the ionization chamber system has been previously recited.

B. With respect to Claim 11, line 4, "an ionization system" should be ----said (or the) ionization system--, since the ionization system has been previously recited.

5 It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary. Appropriate correction is required.

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#### *Claim Rejections - 35 U.S.C. §102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C §102 that form the basis for the rejections under this section made in this Office action.

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 7-9, 11-13, and 16-18 are rejected under 35 U.S.C §102(b) as being anticipated by Primmer (3,781,838).

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A. With respect to Claim 1, Primmer teaches the claimed first electrode and second electrode (Fig. 4, #12' & 13') for electrical connection to an ionization detector system (Col. 1, lines 28-29), and a transformer (Fig. 4, #45) electrically connected to the first electrode and to the second electrode for creating a spark between the first electrode and the second electrode, referred to as spark gaps (Col. 6, lines 13-14).

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B. With respect to Claim 2, Primmer teaches the claimed first resistor ( $R_{12}$ ) electrically connected to a secondary coil (#47) in a secondary portion of the transformer.

C. With respect to Claim 7, Primmer teaches the claimed primary portion including a primary coil, and a secondary including a secondary coil, wherein the

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primary coil includes a different number of loops than are present in the secondary coil (Col. 5, lines 59-64).

D. With respect to Claim 8, Primmer teaches the primary coil includes a greater number of loops than are present in the secondary coil (Col. 5, lines 59-64).

E. With respect to Claim 9, Primmer teaches the claimed DC voltage source electrically connected to a primary portion of the transformer (Col. 3, lines 1-8).

F. With respect to Claim 11, Primmer teaches the method of generating an electrical discharge as stated in paragraphs 5A and F above.

G. With respect to Claim 12, Primmer teaches the claimed first resistor ( $R_{12}$ ) electrically connected to a secondary coil (#47) in a secondary portion of the transformer.

H. With respect to Claim 18, Primmer teaches the generating a substantially constant steady-state current plateau, referred to as a long dwell time (Col. 4, lines 1-3).

I. With respect to Claims 1-4, Primmer teaches the claimed first electrode and second electrode (Fig. 1, #12 & 13) for electrical connection to an ionization detector system (Col. 1, lines 28-29), and a transformer (Fig. 1, #21) electrically connected to the first electrode and to the second electrode for creating a spark between the first electrode and the second electrode, referred to as spark gaps (Col. 4, lines 34-35), the claimed first and second resistors ( $R_2$  &  $R_4$ ) connected in series and electrically connected to the secondary coil in the secondary portion of the transformer.

J. With respect to Claims 11-13, Primmer teaches the device as stated in paragraph 5I above and further teaches a DC voltage source (Col. 3, lines 1-8).

K. With respect to Claims 16 and 17, Primmer teaches the claimed primary coil and a secondary coil in the transformer wherein the primary coil having a greater number of loops than the secondary coil include a different numbers of loops (Col. 5, lines 59-64).

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6. Claims 1, 7, 9, and 11 are rejected under 35 U.S.C §102(b) as being anticipated by Nudelmont (4,629,992).

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A. With respect to Claim 1, Nudelmont teaches the claimed first electrode and second electrode (Fig. 1, #E1 & E2) for electrical connection to an ionization detector system (Col. 1, lines 8-10), and the claimed transformer (#7& #8) electrically connected to the first electrode and to the second electrode for creating a spark, referred to as an arc (Col. 2, lines 50-52; Col. 3, lines 1-5) between the first electrode and the second electrode.

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B. With respect to Claim 7, Nudelmont teaches the claimed primary portion including a primary coil, and a secondary including a secondary coil, wherein the primary coil includes a different number of loops than are present in the secondary coil (Fig. 1, #7 & #8). As seen in Fig. 1, the primary and secondary coils have a different number of loops.

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C. With respect to Claims 9 and 11, Nudelmont teaches the claimed DC voltage source electrically connected to a primary portion of the transformer, considered to be the ±6 v (#1 & #2).

7. Claims 5, 6, 10, 14-15, and 19-20 would be allowable if rewritten to overcome the objections under 37 C.F.R. §1.75, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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#### *Prior Art Cited*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References cited but not applied against the claims are considered to be of interest and should be carefully considered by the applicant.

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Bahr (5,914,603) teaches a circuit arrangement for measuring an ion current comprising a spark plug connected to a transformer with primary and secondary windings.

Stuck (4,090,308) teaches an ionization detector comprising a transformer and electrodes.

### Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine K. Oda whose telephone number is (703) 305-3857. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le, can be reached on (703) 308-0750.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

A Technology Center fax for FILING Technology Center 2800 PAPERS ONLY is available at (703) 308-7722 or (703) 308-7724.

CKO: cko

5 August 2002

*Christine K. Oda*

Christine K. Oda  
Primary Examiner  
Art Unit 2858